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| 10/593,422 | 09/19/2006 | Gavin Edward Churcher | 36-2009 | 1234 |

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| EXAMINER |
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| BROMELL, ALEXANDRIA Y |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on <u>19 September 2006</u>.

2a) ☐ This action is **FINAL**.       2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-16</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>19 September 2006</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/8/07</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

1.      This Office Action is in response to Applicant's application 10/593,422, filed on

9/19/06, which is a 371 of PCT/GB05/00893.

### *Priority*

2.      Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. United

Kingdom 0407389.6, filed on 3/31/04.

### *Information Disclosure Statement*

3.      The information disclosure statement (IDS) submitted on 1/8/07 is in compliance

with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is

being considered by the examiner.

### *Claim Rejections - 35 USC § 101*

4.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

5.      Claims 1-9 are rejected under 35 U.S.C. 101 because the claims are rejected as

falling under the judicial exception of an abstract idea which lacks a useful, concrete,

and tangible result. A claimed series of steps or acts that do not result in a useful,

concrete, and tangible result are not statutory within the meaning of 35 USC 101. In the

instant case, the claims recite, "retrieving information from a database." However, no

useful, concrete, and tangible result is claimed. For example, "writing said data,"

"updating said data," "sending said data" being claimed at the end of the claim may

comprise a useful, concrete, and tangible result. Absent such a result, however, the claims are not statutory.

Claims 10-16 are rejected under 35 U.S.C. 101 because the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When <u>functional</u> descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming <u>non</u>functional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.      Determining the scope and contents of the prior art.
2.      Ascertaining the differences between the prior art and the claims at issue.
3.      Resolving the level of ordinary skill in the pertinent art.
4.      Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4, 7-10, and 13-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Yun et al. (U.S. Patent Publication 20020120616) in view of Gong et

al. (U.S. Patent Publication 20020138528).

With respect to claim 1, Yun teaches receiving a first user query (i.e. receives

user query, [0023]), deriving a first lexical chain set from said first user query using a

predetermined lexical chaining algorithm, said first lexical chain set comprising one or

more lexical chains representing possible interpretations of said first user query (i.e.

lexical chain is derived from step query, or lexical chaining algorithm, [0023]), storing

one or more lexical chains from said first lexical chain set in a lexical chain storage

means (i.e. storing posting, parsing, and document information in a storage module,

[0022, 0045]), identifying a first subset of documents from said database using said first

lexical chain set and a predetermined information retrieval algorithm (i.e. document

group of results retrieved by query, [0025]), and making information relating to said first

subset of documents available to the user (i.e. relevant documents presented to user,

[0020]). Yun does not explicitly disclose receiving a subsequent user query and deriving

a lexical chain from the subsequent user query. However, Gong teaches receiving a

subsequent user query, said subsequent user query being related to said first user

query (i.e. receiving more than one user query, [0010]), deriving a subsequent lexical

chain set from said subsequent user query using a predetermined lexical chaining

algorithm in conjunction with one or more lexical chains stored in said lexical chain

storage means (i.e. text summaries are created by finding lexical chains in documents

that builds until all queries are represented, [0010]), identifying a subsequent subset of

documents from said database using said subsequent lexical chain set and a

predetermined information retrieval algorithm, and making information relating to said

subsequent subset of documents available to the user (i.e. information retrieval returns

relevant set of documents for user, [0006]). Yun and Gong are analogous art because

they are from the same field of endeavor of facilitating information retrieval using lexical

information. At the time of the invention, it would have been obvious to one of ordinary

skill in the art, having the teachings of Yun and Gong before him or her, to modify the

system of Yun with the teachings of Gong in order to use lexical chains for text

summarization (Gong, [0010]). The motivation for doing so would have been to present

to the user high quality and relevant document information based on queries that the

user has run (Gong, [0016]). Therefore, it would have been obvious to combine Gong

with Yun to obtain the invention as specified in the instant claim(s).

With respect to claim 4, Yun teaches methods for using a lexical analyzer

generator to parse queries [0023]. Gong teaches receiving an indication from a user as

to whether a subsequent user query is considered to be related to a previous user query

or not (i.e. user determines which documents are most relevant using a relevance

score, [0043]). Therefore, the limitations of claim 4 are rejected in the analysis of claim 1

above, and the claim is rejected on that basis.

With respect to claim 7, Yun teaches the database comprises meta-data relating

to said information (i.e. HTML tags contain metadata about document, [0048]).

With respect to claim 8, Yun teaches the information in the database is indexed

using lexical chains (i.e. database is indexed using lexical chains, [0020-0023]).

With respect to claim 9, Yun teaches the predetermined information retrieval

algorithm is arranged to identify documents with reference to said indexed information

(i.e. lexical analyzer generator identifies relevant indexed documents, [0023]).

With respect to claim 10, Yun teaches means for receiving a first user query (i.e.

receives user query, [0023]), means arranged to derive a first lexical chain set from a

first user query using a predetermined lexical chaining algorithm, said first lexical chain

set comprising one or more lexical chains representing possible interpretations of said

first user query (i.e. lexical chain is derived from step query, or lexical chaining

algorithm, [0023]), means arranged to store one or more lexical chains from said first

lexical chain set in a lexical chain storage means (i.e. storing posting, parsing, and

document information in a storage module, [0022, 0045]), means arranged to identify a

first subset of documents from said database using said first lexical chain set and a

predetermined information retrieval algorithm (i.e. document group of results retrieved

by query, [0025]), and means for making information relating to said first subset of

documents available to the user (i.e. relevant documents presented to user, [0020]).

Yun does not explicitly disclose receiving a subsequent user query and deriving a

lexical chain from the subsequent user query.  However, Gong teaches means for

receiving a subsequent user query, said subsequent user query being related to said

first user query (i.e. receiving more than one user query, [0010]), means arranged to

derive a subsequent lexical chain set from said subsequent user query using a

predetermined lexical chaining algorithm in conjunction with one or more lexical chains

stored in said lexical chain storage means i.e. text summaries are created by finding

lexical chains in documents that builds until all queries are represented, [0010]), means

arranged to identify a subsequent subset of documents from said database using said

subsequent lexical chain set and a predetermined information retrieval algorithm, and

means for making information relating to said subsequent subset of documents

available to the user (i.e. information retrieval returns relevant set of documents for

user, [0006]). Yun and Gong are analogous art because they are from the same field of

endeavor of facilitating information retrieval using lexical information.  At the time of the

invention, it would have been obvious to one of ordinary skill in the art, having the

teachings of Yun and Gong before him or her, to modify the system of Yun with the

teachings of Gong in order to use lexical chains for text summarization (Gong, [0010]).

The motivation for doing so would have been to present to the user high quality and relevant document information based on queries that the user has run (Gong, [0016]). Therefore, it would have been obvious to combine Gong with Yun to obtain the invention as specified in the instant claim(s).

With respect to claim 13, Yun teaches methods for using a lexical analyzer generator to parse queries [0023]. Gong teaches means for receiving an indication from a user as to whether a subsequent user query is considered to be related to a previous user query or not (i.e. user determines which documents are most relevant using a relevance score, [0043]). Therefore, the limitations of claim 13 are rejected in the analysis of claim 10 above, and the claim is rejected on that basis.

With respect to claim 14, Yun teaches the database comprises meta-data relating to said information (i.e. HTML tags contain metadata about document, [0048]).

With respect to claim 15, Yun teaches the information in the database is indexed using lexical chains (i.e. database is indexed using lexical chains, [0020-0023]).

With respect to claim 16, Yun teaches the predetermined information retrieval algorithm is arranged to identify documents with reference to said indexed information (i.e. lexical analyzer generator identifies relevant indexed documents, [0023]).

Claims 2-3, 5-6, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (U.S. Patent Publication 20020120616) in view of gong et al. (U.S. Patent Publication 20020138528), further in view of Tarquini (U.S. Patent Publication 20030093517).

With respect to claim 2, Yun and Gong teach methods for using a lexical analyzer generator to parse queries (Yun, [0023]), and outputting high quality and relevant search documents (Gong, [0016]). Yun and Gong do not explicitly disclose deriving a lexical chain from subset of documents. However, Tarquini teaches deriving a lexical chain set from said subset of documents (i.e. lexical tree branch is populated from limiting search, [0049]), and updating said lexical chain storage means in view of said lexical chain set derived from said subset of documents (i.e. lexical search tree is updated, [0049]). Yun, Gong, and Tarquini are analogous art because they are from the same field of endeavor of facilitating information retrieval. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Yun, Gong, and Tarquini before him or her, to modify the system of Yun with the teachings of Gong and Tarquini in order to filter relevant documents for a user (Tarquini, [0007]). The motivation for doing so would have been to filter and retrieve documents, or pages, for a user by using a lexical search tree data structure to store information (Tarquini, [007]). Therefore, it would have been obvious to combine Tarquini with Gong with Yun to obtain the invention as specified in the instant claim(s).

With respect to claim 3, Yun teaches methods for using a lexical analyzer generator to parse queries [0023]. Gong teaches receiving an indication from a user as to which documents from said subset of documents are considered to be relevant (i.e. user determines which documents are most relevant using a relevance score, [0043]). Yun and Gong do not explicitly disclose deriving a lexical chain from subset of documents, or updating respective storage information. However, Tarquini teaches

deriving a lexical chain set from those documents which are considered to be relevant
(i.e. lexical tree branch is populated from limiting search, [0049]), and updating said
lexical chain storage means in view of said lexical chain set derived from said
documents which are considered to be relevant (i.e. lexical search tree is updated,
[0049]). Yun, Gong, and Tarquini are analogous art because they are from the same
field of endeavor of facilitating information retrieval. At the time of the invention, it would
have been obvious to one of ordinary skill in the art, having the teachings of Yun, Gong,
and Tarquini before him or her, to modify the system of Yun with the teachings of Gong
and Tarquini in order to filter relevant documents for a user (Tarquini, [0007]). The
motivation for doing so would have been to filter and retrieve documents, or pages, for a
user by using a lexical search tree data structure to store information (Tarquini, [007]).
Therefore, it would have been obvious to combine Tarquini with Gong with Yun to
obtain the invention as specified in the instant claim(s).

With respect to claim 5, Yun and Gong teach methods for using a lexical
analyzer generator to parse queries (Yun, [0023]), and outputting high quality and
relevant search documents (Gong, [0016]), and receiving a subsequent user query
(Gong, [0010]). Yun and Gong do not explicitly disclose deriving a subsequent lexical
chain and identifying corresponding documents. However, Tarquini teaches deriving a
subsequent lexical chain set, and identifying a subsequent subset of documents and
making information relating to said subsequent subset of documents available to the
user are repeated in the event that an indication is received from a user that a
subsequent user query is considered to be related to a previous user query (i.e. lexical

tree branch is populated from further limiting search, if query is related to previous query, [0049]). Yun, Gong, and Tarquini are analogous art because they are from the same field of endeavor of facilitating information retrieval. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Yun, Gong, and Tarquini before him or her, to modify the system of Yun with the teachings of Gong and Tarquini in order to filter relevant documents for a user (Tarquini, [0007]). The motivation for doing so would have been to filter and retrieve documents, or pages, for a user by using a lexical search tree data structure to store information (Tarquini, [007]). Therefore, it would have been obvious to combine Tarquini with Gong with Yun to obtain the invention as specified in the instant claim(s).

With respect to claim 6, Yun and Gong teach methods for using a lexical analyzer generator to parse queries (Yun, [0023]), and outputting high quality and relevant search documents (Gong, [0016]) and receiving a subsequent user query (Gong, [0010]). Yun and Gong do not explicitly disclose deriving a subsequent lexical chain and identifying corresponding documents. However, Tarquini teaches deriving a subsequent lexical chain set, and identifying a subsequent subset of documents and making information relating to said subsequent subset of documents available to the user are repeated in the event that no indication is received from a user that a further user query is considered not to be related to a previous user query (i.e. lexical tree branch is populated from further limiting search, if query is not related to previous query, [0049]). Yun, Gong, and Tarquini are analogous art because they are from the same field of endeavor of facilitating information retrieval. At the time of the invention, it would

have been obvious to one of ordinary skill in the art, having the teachings of Yun, Gong,

and Tarquini before him or her, to modify the system of Yun with the teachings of Gong

and Tarquini in order to filter relevant documents for a user (Tarquini, [0007]). The

motivation for doing so would have been to filter and retrieve documents, or pages, for a

user by using a lexical search tree data structure to store information (Tarquini, [007]).

Therefore, it would have been obvious to combine Tarquini with Gong with Yun to

obtain the invention as specified in the instant claim(s).

With respect to claim 11, Yun and Gong teach methods for using a lexical

analyzer generator to parse queries (Yun, [0023]), and outputting high quality and

relevant search documents (Gong, [0016]). Yun and Gong do not explicitly disclose

deriving a lexical chain from subset of documents. However, Tarquini teaches means

for deriving a lexical chain set from an identified subset of documents (i.e. lexical tree

branch is populated from limiting search, [0049]), means for updating said lexical chain

storage means in view of said lexical chain set derived from said subset of documents

(i.e. lexical search tree is updated, [0049]). Yun, Gong, and Tarquini are analogous art

because they are from the same field of endeavor of facilitating information retrieval. At

the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Yun, Gong, and Tarquini before him or her, to modify the

system of Yun with the teachings of Gong and Tarquini in order to filter relevant

documents for a user (Tarquini, [0007]). The motivation for doing so would have been

to filter and retrieve documents, or pages, for a user by using a lexical search tree data

structure to store information (Tarquini, [007]). Therefore, it would have been obvious to

combine Tarquini with Gong with Yun to obtain the invention as specified in the instant claim(s).

With respect to claim 12, Yun teaches methods for using a lexical analyzer generator to parse queries [0023]. Gong teaches means for receiving an indication from a user as to which documents from said subset of documents are considered to be relevant (i.e. user determines which documents are most relevant using a relevance score, [0043]). Yun and Gong do not explicitly disclose deriving a lexical chain from subset of documents, or updating respective storage information. However, Tarquini teaches means for deriving a lexical chain set from those documents which are considered to be relevant (i.e. lexical tree branch is populated from limiting search, [0049]), and means for updating said lexical chain storage means in view of said lexical chain set derived from said documents which are considered to be relevant (i.e. lexical search tree is updated, [0049]). Yun, Gong, and Tarquini are analogous art because they are from the same field of endeavor of facilitating information retrieval. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Yun, Gong, and Tarquini before him or her, to modify the system of Yun with the teachings of Gong and Tarquini in order to filter relevant documents for a user (Tarquini, [0007]). The motivation for doing so would have been to filter and retrieve documents, or pages, for a user by using a lexical search tree data structure to store information (Tarquini, [007]). Therefore, it would have been obvious to combine Tarquini with Gong with Yun to obtain the invention as specified in the instant claim(s).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexandria Y. Bromell whose telephone number is 571-270-3034. The examiner can normally be reached on M-R 6:30-5.
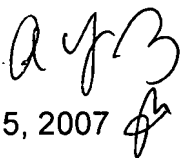
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ali can be reached on 571-272-4105. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexandria Y Bromell
Examiner
Art Unit 2169

AYB
October 15, 2007

SPE 2169